

with ribavirin, in the therapeutic scheme of 24 weeks for hepatitis C genotype 2/3 in Brazilian Public Health System (SUS). **METHODS:** To project disease progression, a Markov model was built based on clinical stages of chronic disease. A Delphi panel was conducted to evaluate direct medical resources related to each stage, followed by micro-costing of the results. Perspective was from a public payer. Source used for costing was government reimbursement procedures list (SAI/SIH-SUS). Drug acquisition costs for a 70 kg patient were obtained from 'Banco de Preços em Saúde', government official source. Costs were reported in 2009 Brazilian Reais (US\$1=\$Brz1.7). Efficacy of pegylated-interferons was obtained from a meta-analysis of 7 RTCs comparing the drugs, detailed elsewhere. For genotype 2/3, median rate of sustained virological response was 79.2% for peginterferon-alfa-2a and 73.8% for peginterferon-alfa-2b. Discount rate for costs and outcomes was 5%, according to Brazilian guidelines for HTA. **RESULTS:** Assuming a lifetime perspective, expected costs and outcomes for peginterferon-alfa-2a were \$Brz15,898, 15.21LYs and 14.57QALYs; for peginterferon-alfa-2b, \$Brz18,439, 15.11LYs and 14.32QALYs. Cost-effectiveness analysis estimated an ICER of -\$Brz25,289/LY and -\$Brz10,426/QALYs for peginterferon-alfa-2a, being the dominant therapy. For each 1000 patients treated with peginterferon-alfa-2a instead of peginterferon-alfa-2b, savings granted can be up to \$Brz2,5 million which would allow treatment of 160 more patients. **CONCLUSIONS:** These findings suggest that treatment with peginterferon-alfa-2a is more effective and less costly when compared to peginterferon-alfa-2b under SUS perspective in Brazil.

PGI18

COST-EFFECTIVENESS ANALYSIS OF TREATMENT WITH PEGINTERFERON-ALFA-2A VERSUS PEGINTERFERON-ALFA-2B FOR PATIENTS WITH GENOTYPE 1 CHRONIC HEPATITIS C UNDER THE PUBLIC PAYER PERSPECTIVE IN BRAZIL

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Chronic hepatitis C affects approximately 180 million people worldwide being one of the main causes of chronic liver disease. About 20% of patients with chronic hepatitis C can develop cirrhosis over 20 years, thus presenting risk of developing hepatic complications. Treatment is currently based on pegylated-interferon-alfa-2a or alfa-2b plus ribavirin. Sustained virologic response (SVR) is associated with a better prognosis compared to untreated patients and treatment failures. **OBJECTIVES:** To compare treatment costs and outcomes of peginterferon-alfa-2a *versus* peginterferon-alfa-2b, both plus ribavirin, in the therapeutic scheme of 48 weeks for hepatitis C genotype 1 in Brazilian Public Health System (SUS). **METHODS:** To project disease progression, a Markov model was built based on clinical stages of chronic disease. A Delphi panel was conducted to evaluate direct medical resources related to each stage, followed by micro-costing of results. Perspective was from a public payer. Costing was based on government reimbursement procedures list (SAI/SIH-SUS). Drug acquisition costs (70 kg patient) were obtained from 'Banco de Preços em Saúde', government source. Costs were in 2009 Brazilian Reais (US\$1=\$Brz1.7). Efficacy of pegylated-interferons was obtained from a meta-analysis of 7 RTCs comparing the drugs, detailed elsewhere. For genotype 1, SVR median rate was 42.1% for peginterferon-alfa-2a and 33.3% for peginterferon-alfa-2b. Discount rate (costs and outcomes) was 5%, according to Brazilian guidelines for HTA. **RESULTS:** Assuming a lifetime perspective, expected costs and outcomes for peginterferon-alfa-2a were \$Brz36,713, 14.51LYs and 12.89QALYs; for peginterferon-alfa-2b \$Brz41,191, 14.35LYs and 12.49QALYs gained. Cost-effectiveness analysis estimated an ICER of -\$Brz27,266/LY and -\$Brz11,277/QALY for peginterferon-alfa-2a, being the dominant therapy. For each 1000 patients treated with peginterferon-alfa-2a instead of peginterferon-alfa-2b, savings granted can be up to \$Brz4.4 million which would allow treatment of 120 more patients. **CONCLUSIONS:** Findings suggest that treatment with peginterferon-alfa-2a is more effective and less costly when compared to peginterferon-alfa-2b under SUS perspective in Brazil.

PGI19

COST-EFFECTIVENESS ANALYSIS OF TREATMENT WITH PEGINTERFERON-ALFA-2A VERSUS PEGINTERFERON-ALFA-2B FOR PATIENTS WITH GENOTYPES 2/3 CHRONIC HEPATITIS C UNDER THE PRIVATE PAYER PERSPECTIVE IN BRAZIL

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Hepatitis C affects approximately 180 million people worldwide and is currently one of the main causes of chronic liver disease. HCV infection progresses to chronicity in up to 80% of infected individuals, from whom approximately 20% progress to cirrhosis over 20 years. These individuals are at risk of developing hepatic failure and/or hepatocellular carcinoma. **OBJECTIVES:** To compare treatment costs and outcomes of peginterferon-alfa-2a *versus* peginterferon-alfa-2b, both associated with ribavirin, in the therapeutic scheme of 24 weeks for hepatitis C in Brazilian private market for the treatment of HCV infection genotypes 2/3. **METHODS:** To project disease progression, a Markov model was built based on clinical stages of chronic disease. A Delphi panel was conducted to evaluate direct medical resources related to each stage, followed by micro-costing of the results. The perspective was from a private payer. Source used for costing was medical society physicians fee list (CBHPM-2008). Drug acquisition costs for a 70kg patient were obtained from official public sources

(Kairos Magazine-Nov2009). Costs were reported in 2009 Brazilian Reais (US\$1=\$Brz1.7). Efficacy of pegylated-interferons was obtained from a meta-analysis of 7 RTCs comparing the drugs, detailed elsewhere. For genotype 2/3, median rate of sustained virological response was 79.2% for peginterferon-alfa-2a and 73.8% for peginterferon-alfa-2b. Discount rate for costs and outcomes was 5%, according to Brazilian guidelines for HTA. **RESULTS:** Assuming a lifetime perspective, expected costs and outcomes for peginterferon-alfa-2a were \$Brz48,363, 15.21LYs and 14.57QALYs; for peginterferon-alfa-2b, \$Brz52,154, 15.11LYs and 14.32QALYs. Cost-effectiveness analysis estimated an ICER of -\$Brz37,614/LY and -\$Brz15,556/QALYs for peginterferon-alfa-2a, being the dominant therapy. For each 1000 patients treated with peginterferon-alfa-2a instead of peginterferon-alfa-2b, savings granted can be up to \$Brz3.8 million which would allow treatment of 78 more patients. **CONCLUSIONS:** These findings suggest that treatment with peginterferon-alfa-2a is more effective and less costly when compared to peginterferon-alfa-2b under private payer perspective in Brazil.

PGI21

ECONOMIC ANALYSIS OF ALVIMOPAN FOR PREVENTION AND MANAGEMENT OF POST-OPERATIVE ILEUS

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OBJECTIVES: Whether the use of alvimopan is cost-effective, compared to the standard post-operative care, for post-operative ileus (POI) among patients undergoing small- or large-bowel resection via laparotomy. **METHODS:** We constructed a formal decision model from the health care system perspective. The clinical outcomes (time to discharge order written [DCO], post-operative nasogastric tube insertion, POI-related readmission within 7 days, nausea and vomiting) were obtained from meta-analyses of published studies. Cost inputs included costs associated with the drugs, nursing labor, readmission, and hospitalization. Cost-consequence was assessed by determining the net cost of alvimopan use and subsequent reduction in length of stay (LOS). Sensitivity analyses were conducted. **RESULTS:** The alvimopan drug cost was \$570 based on an average of 9.5 doses. Given the 18.4-hour mean reduction in DCO, the use of alvimopan reduced hospitalization costs by \$2021. In the base-case, alvimopan resulted in a \$1187 per-person cost savings. In sensitivity analyses, the result was robust to changes in key parameters including the cost and number of doses of alvimopan, DCO, readmission rates, and hospitalization cost. In scenario analyses, alvimopan use yielded a cost saving of \$897 when no difference in readmission rates was assumed. However, when no difference in DCO was assumed, the total cost of care with alvimopan was \$278 greater. Similarly, it was \$569 greater when both readmission rates and DCO were assumed to be equal between strategies. In Monte Carlo simulation, the mean difference in overall cost of care was \$1252 (95% certainty interval: -\$398 to \$6306), favoring the use of alvimopan. **CONCLUSIONS:** The overall hospitalization cost reduction associated with the use of alvimopan offsets the drug cost. Alvimopan appears to be cost-saving for POI among patients undergoing bowel resection via laparotomy. This finding is not applicable to the less-invasive laparoscopic surgical approach which has been associated with decreased post-operative morbidity and LOS.

PGI22

EVALUATION OF COST-EFFECTIVENESS OF CHRONIC HEPATITIS B TREATMENTS: ENTECAVIR AND TELBIVUDINE

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OBJECTIVES: The aim of this study was to evaluate the cost-effectiveness of entecavir and telbivudine in HBeAg-positive/-negative chronic hepatitis B (CHB) patients based on the ability of each drug to suppress viral replication. **METHODS:** A cost-effectiveness analysis was performed to evaluate the impact of treatment on disease morbidity and costs over the lifetime and the short term (10 years) for a patient based on a societal perspective. A decision tree was developed to assess the drug abilities to suppress HBV DNA replication. To obtain probability estimates with HBV DNA levels and resistance rates of entecavir and telbivudine, recent entecavir-lamivudine BEHoLD studies and telbivudine-lamivudine GLOBE studies were indirectly compared. The risks of progression to compensated cirrhosis (CC), decompensated cirrhosis (DC), or HCC were derived from the REVEAL-HBV study, which was to evaluate the relationship between hepatitis B viremia and progression to cirrhosis and HCC. For the life expectancy of DC and HCC, the declining exponential approximation of life (DEALE) method was applied based on the published annual mortality rates of DC and HCC. Both direct and indirect medical costs were included and univariate sensitivity analyses were performed on parameters in the model to evaluate the impact of parameter uncertainty. **RESULTS:** On a per-person basis, the ICERs of entecavir compared to telbivudine for lifetime therapy were \$13,649 and \$52,776 in HBeAg-positive and HBeAg-negative CHB, respectively. In the 10-year model, the ICERs were \$US 39,089 and \$US 365,100 in HBeAg-positive and HBeAg-negative CHB, respectively. One-way sensitivity analyses showed that the model was robust to most parameters. However, parameters such as drug costs, discount rate and average time to events from study entry were sensitive. **CONCLUSIONS:** For lifetime therapy and for HBeAg-positive patients, entecavir was cost effective compared to telbivudine. However, in the short-term treatment model for HBeAg-negative CHB, entecavir was not cost-effective.